

Introduction to Automotive Technology

Cypress Ridge High School Automotive Technology Program is a NATEF certified pre-employment lab.

Automotive Technology (Auto Tech) I is a two (2) hour block designed for eleventh grade students only, with a summer internship for students who desire to enter into the Automotive Youth Education Systems (AYES) or the Automotive Specialization Coop (ASC) program.

Auto Tech II is a two (2) or three (3) hour block, depending on the student's academic needs, offered to twelfth grade students. A prerequisite to Auto Tech II is the completion of Auto Tech I.

Students who sign up for Auto Tech I must complete an automotive technology application and be interviewed.

The Automotive Technology Application / Interview Process

The application/interview process is to help the administration, counselors and the instructor assist students with the process of career exploration. Since there are many students with interest in the automotive field and a limited number of openings in this program, this process allows the interview committee to select the most appropriate students for the program. This process is inclusive to all interested junior students, regardless of ethnicity or gender.

This application should be completed by the student and the parent(s). All information that applies should be filled in. The completed application should be turned in to the Counseling Office. The student and parent must sign the application before a student will be scheduled for an interview.

Students will be scheduled for interviews by the Counseling Office. The interview committee is comprised of counselors, administrators, and the instructor of the automotive program.

ASE / NATEF

“The Board of the National Institute for Automotive Service Excellence (ASE) is the body responsible for the Automobile Technician Training Certification Program. ASE will grant certification to programs that comply with the evaluation procedure, meet established standards, and adhere to the policies” outlined in the *ASE Certification for Automobile Training Programs Handbook* (NATEF, 2002).

ASE is responsible for certifying the individual technicians, and NATEF (National Automotive Technicians Education Foundation) is responsible for certifying the training facility. Currently, Cypress Ridge High School (CRHS) Auto Tech Program has enough instructional hours for four of the eight areas offered by NATEF for the automotive program.

The areas are 1) brakes, 2) steering and suspension, 3) electrical and electronics, and 4) engine performance.

CRHS obtained NATEF recertification on March of 2008 and is valid for five years.

Lab Fees

CRHS Auto Tech Program is a pre-employment lab designed to simulate dealership and independent shop operations. Students are required to dress according to industry work standards and are responsible for their safety and instruction.

Each student will keep and maintain an automotive notebook and diagnostic lab reports. The diagnostic lab reports are used to track what each student has completed in the shop area. An automotive lab fee of sixty dollars (\$60.00) is needed for each student. A breakdown is listed below.

- Club dues \$25.00
- Safety glasses \$5.00
- Shop work shirt \$30.00

Dress Code

Auto Tech students are required to:

- wear purchased work shirt
- wear industry-related pants (i.e. Navy blue Dickie work pants) (baggy pants and/ or shorts are NOT permitted)
- keep facial hair neatly groomed
- keep hair neatly groomed
- NOT wear any jewelry

*Dress code must also meet the district's Student Code of Conduct.

Auto Tech I

Auto Tech I is an entry-level class offered to eleventh grade students. This class offers a pre-employment lab internship in the summer for students choosing to participate in the Automotive Youth Education Systems (AYES) or the Automotive Specialization Coop (ASC) program. Upon passing both semesters of Auto Tech I, a student will receive two (2) credits.

Auto Tech I is divided into 1) classroom theory, 2) online training, and 3) hands-on skills.

Listed below is an outline of what will be taught in Auto Tech I:

- Orientation of Automotive Program
- Career Opportunities in the Automotive Industry
- S/P2 Automotive Safety Online Program (EPA and OSHA approved training) (80% mastery of safety test)
- Skills USA and PDP Level 1 (Professional Development Program Training in Employability Skills)
- Hand Tools and Equipment Training
- Vehicle Service Maintenance
- Brakes
- Electrical / Electronics
- Steering and Suspension
- Engine Performance

The students receive classroom instruction, enhanced by online technical training. Students then receive a NATEF Job Task Sheet to complete on a donated vehicle, while under constant instructor supervision

Upon completion of the Job Task Sheet, students are rated on a scale from zero (0) to five (5). The rating does not affect a student's grade, but it is used as a tracking device for student progress by NATEF, CRHS, and the student.

Upon completion of the level one NATEF task, students will receive a level one certificate of completion with the NATEF logo. **(This certificate does not imply that the student is certified by ASE.)**

Safety is of utmost importance for the administration and instructor of CRHS, so **NO** horseplay will be permitted **AT ALL**. A student who speeds, hot-roads, or spins the tires on a donated vehicle **will** face disciplinary actions, and s/he may lose driving privileges on campus.

Auto Tech II

Auto Tech II is an advanced training course designed to give students enough technical training to enter the work force as an apprentice-level technician. Completion of Auto Tech I is a prerequisite.

Upon passing both semesters of Auto Tech II, a student can receive two (2) credits if enrolled in the two (2) hour block, or receive three (3) credits if enrolled in the three (3) hour block.

Listed below is an outline of what will be taught in Auto Tech II:

- Orientation
- Safety
- Technical Information
- Skills USA and PDP Level 2 (Professional Development Program Training in Employability Skills)
- Advanced Brakes
- Advanced Electrical / Electronics
- Advanced Steering and Suspension
- Advanced Engine Performance

The students receive classroom instruction, enhanced by online technical training. Students then receive a NATEF Job Task Sheet to complete on either a donated vehicle or an actual “live” vehicle from the community and/or school, while under constant instructor supervision

Upon completion of the Job Task Sheet, students are rated on a scale from zero (0) to five (5). The rating does not affect a student’s grade, but it is used as a tracking device for student progress by NATEF, CRHS, and the student.

Auto Tech II offers job opportunities in the transportation industry through the Automotive Specialization Coop (ASC) program. (For more information, see the sections entitled **Automotive Specialization Coop (ASC)** and the **Automotive Youth Education Systems (AYES)**.)

Upon completion of the level two NATEF task, students will receive a level two certificate of completion with the NATEF logo. **(This certificate does not imply that the student is certified by ASE.)**

Safety is of utmost importance for the administration and instructor of CRHS, so **NO** horseplay will be permitted **AT ALL**. A student who speeds, hot-rods, or spins the tires on a donated vehicle **will** face disciplinary actions, and s/he may lose driving privileges on campus.

Safety and Rules of Program

Safety is the number one priority for all students entering the CRHS Automotive Technology Program. There is an extensive safety training taught in the classroom and online using S/P2 and Melior Autoshop Safety Training. All phases must be passed with a minimum of 80% in order for the student to participate in lab activities.

Classroom Training

The classroom instruction uses University of Missouri curriculum and Automotive Excellence by McGraw Hill publishers. Training includes the following:

1. Shop Procedures
2. Hazardous Materials and Waste
3. Fire Safety
4. Personal Protection Equipment
5. Tools and Equipment Safety
6. Blood Borne Pathogens
7. Electrical Safety

S/P2 (Safety and Pollution Prevention)

S/P2 is an online training recognized by OSHA (Occupational Safety and Health Administration) and EPA (Environmental Protection Agency).

Federal law requires each employee and student be trained annually before s/he begins working.

Students complete modules concerning safety and HazMat. After completing all the modules and passing the quizzes, a final exam is administered by S/P2. S/P2 must be passed with a minimal score of 80%, at which time a student receives a certificate.

Grades

Grading categories are as follows:

Major Grades = 60% of class grade (Major Grades include tests, performance, and coop internship.)

Minor Grades = 40% of class grade (Minor Grades include quizzes, lab work, and class work.)

Major Grades

Tests are ASE type tests.

The performance grade includes dressing out each day. Each student is required to wear a uniform, as outlined in the **Dress Code** section of this manual. This grade also includes punctuality and completion of all paperwork. *Students must call the auto instructors' office if they are to be absent for any reason.

For the Coop Grade, each student involved with the Automotive Specialization Coop (ASC) program will be graded by his/her performance at his/her job. This determination is made by the instructor and the student's employer.

Skills USA

According to Skills USA.org, “SkillsUSA is a partnership of students, teachers and industry representatives working together to ensure America has a skilled work force. It helps each student excel.

“SkillsUSA is a national nonprofit organization serving teachers and high school and college students who are preparing for careers in trade, technical and skilled service occupations,” (www.skillsusa.org).

Officers are panel-selected by CRHS administrators, teachers, and counselors.

Offices include:

- President
- Vice President
- Secretary
- Treasurer
- Parliamentarian
- Reporter
- Sergeant at Arms

The Auto Tech Club meets twice each six weeks. It is also involved in two community service projects each school year. Attendance to club meetings is required in order to receive a letter in the Auto Tech Program.

Skills USA offers competition at the district level, state level, and national level. Students who are interested may participate as long as they are passing all classes. Skills USA competitions are governed by UIL rules.

PDP (Professional Development Program)

“SkillsUSA's Professional Development Program (PDP) guides students through 84 employability skills activities that are covered in seven levels of the program. The activities help meet the competencies outlined by the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS).

PDP provides the tools to strengthen school-based learning, work-based learning and connecting activities as outlined in the School to Work Opportunities Act.

Skills lessons include self-assessments to communications skills, ethics, conflict resolution, government awareness, time management skills, career research and more.

Use of the PDP encourages local business involvement in the training of tomorrow's entry-level workers. The curriculum can be used as an individual self-development course or for group instruction. It can be integrated into the existing curriculum or used as a separate course of study. Students are recognized for individual achievement as they develop their professional and occupational skills” (www.skillsusa.org).

Lettering

In order to letter in the Auto Tech Program, the student must:

- A) maintain an eighty (80) grade point average in Auto Tech for both the fall and spring semester
- B) pass all classes both semesters
- C) have no more than three (3) unexcused absences per semester (six total)
- D) receive no citations from any law enforcement agency at school or school functions
- E) pass the safety test
- F) pass a random hand tool identification test
- G) master the tire machine, wheel balancer and two post lifts
- H) be able to check the vital signs on a customer's vehicle (oil level, water level, power steering fluid level, transmission fluid level, and brake fluid level)
- I) attend all Skills USA Auto Tech Club meetings
- J) participate in all community projects decided on by the chapter
- K) complete all Level One NATEF tasks

AYES (Automotive Youth Education Systems)

www.ayes.org

ASC (Automotive Specialization Coop)

ASC is a CFISD specialized coop targeting students interested in an entry-level position in the transportation industry (i.e., automotive, diesel, marine, motorcycle, parts retail, etc), offered to twelfth grade students only.

Students interested in obtaining a part time job must apply through the Auto Tech Instructor.

Early release from school is an option if a student is hired.

NOTE:

Students that are placed at a job station through the AYES or ASC program must have own transportation **AND** must have a valid social security number or work permit.